



# Special PC – Cost Containment / Comparative Cost Framework Workshop

August 29, 2019

Special PC – Cost Containment /  
Comparative Cost Framework

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Coordination



# Current PJM FERC Order 1000 Implementation and Cost Containment

- PJM Competitive Planning process in place since the 2014 timeframe
- ~ 15 windows
- ~ 850 proposals
- ~ 150 had proposed cost containment provisions



Home > Planning > Competitive Planning Process

## Competitive Planning Process

The PJM competitive planning process implements FERC Order 1000. The process affords non-incumbent transmission developers an opportunity to participate in the regional planning and expansion of the PJM bulk electric system. By publishing a set of criteria violations and soliciting solutions from competing transmission developers, PJM and the FERC hope to encourage innovative, cost effective and timely solutions to the challenges of building and maintaining a highly reliable electric system.

PJM will announce in the [Transmission Expansion Advisory Committee \(TEAC\)](#) its intention to solicit competitive solutions to identified planning needs. The “windows” for submitting such solutions fit into three categories and follow the 18-month and 24-month planning cycles as described in Manual 14F: [Clean](#) [WEB](#) | [Clean](#) [PDF](#).

Planning Cycles	Standard Window Length	Required In-Service Date (Years)
Long-Term - considers reliability criteria violations, economic constraints, system conditions and public policy requirements	120 days	> 5
Short-Term - considers reliability criteria violations	60 days	3-5
Immediate-Need Reliability - considers reliability criteria violations	Shortened	< 3

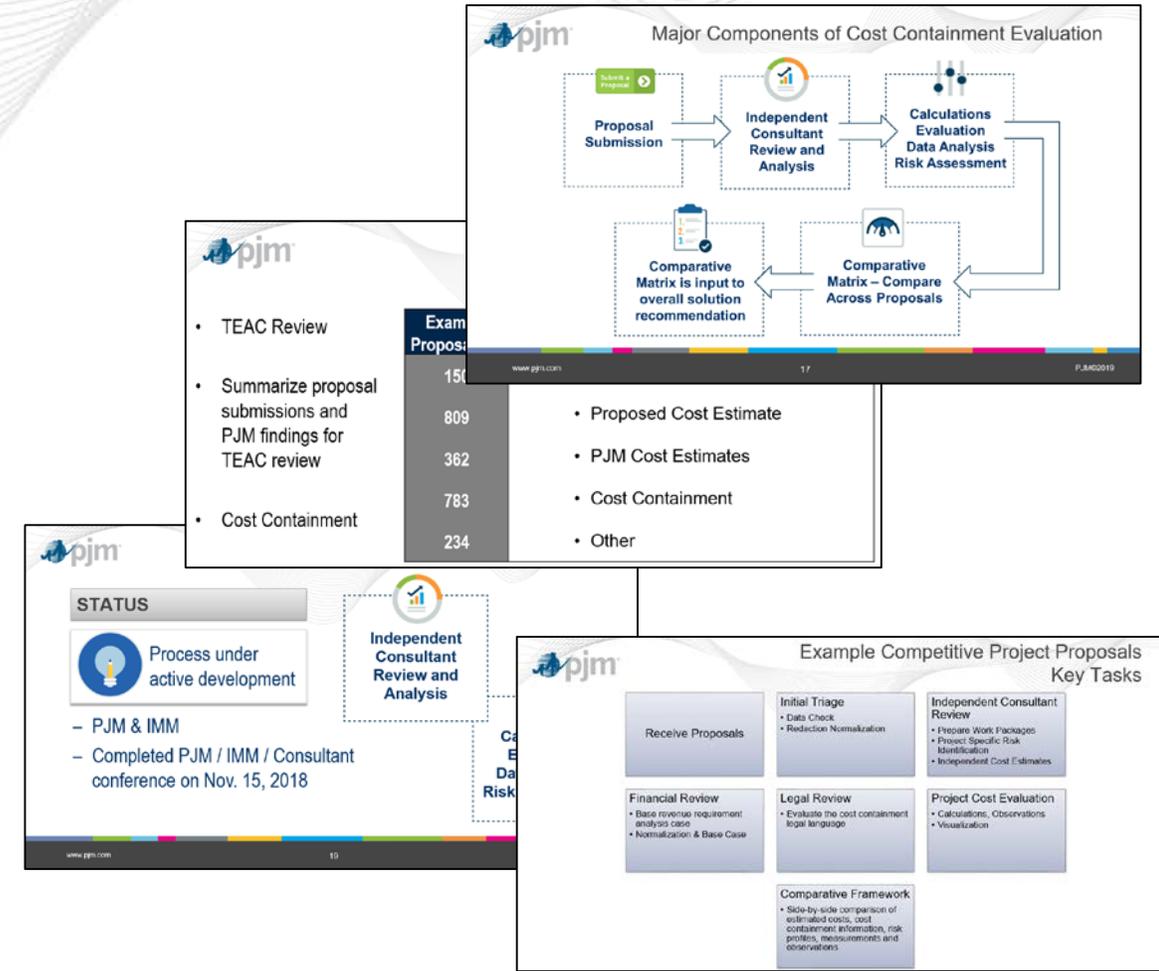
<https://pjm.com/planning/competitive-planning-process.aspx>

- Approximately 150 competitive proposals have had a cost containment component as part of the proposal.
- Current process
- Stakeholders at the PJM Markets and Reliability Committee in May 2018 initiated a cost containment effort



# PJM Planning Committee Presentations

- Comparative Cost Framework development
- PJM & IMM
- Input from Financial Consultant
- Planning Committee Input and Updates



- May 2018
  - MRC motions initiating the cost containment effort approved (and Aug 2018 motion to delay schedule)
- 2Q and 3Q 2019
  - Timeline and overall conceptual approach updates
- January 2019
  - Overview of major components and overall approach
- February 2019
  - Additional detail of overall approach
- March 2019
  - Additional detail and example data visualization
- April 2019
  - Examples of what output to expect from the cost containment process

- May 2019
  - High level example and discussion of process implementation
- June 2019
  - High level summary of process and next step
- July and August 2019
  - Schedule and next steps
- [Today - August 29, 2019 – Special PC – Cost Containment Workshop](#)



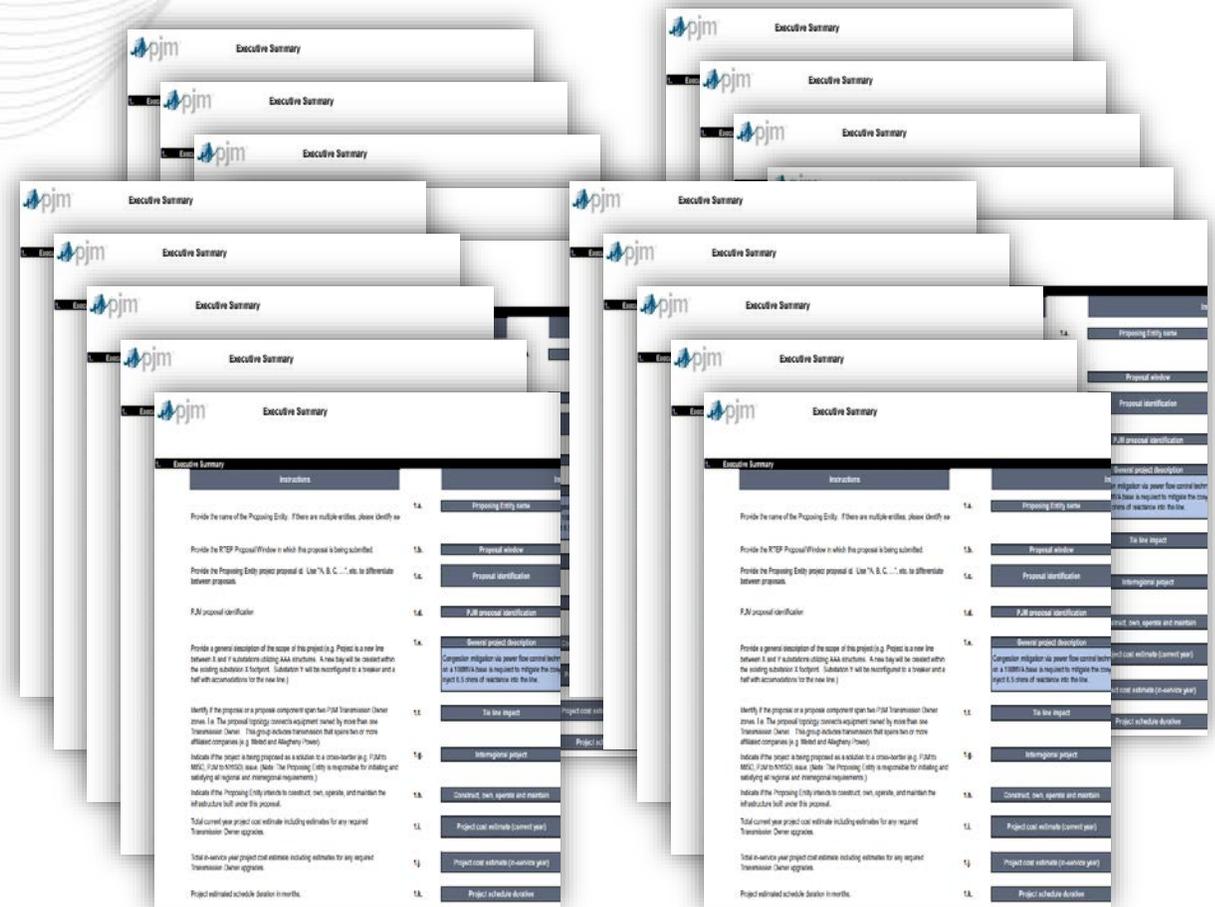
# PJM Discussions With Monitoring Analytics (Market Monitor)

- 2018
  - June
  - July
  - September
  - November
    - Joint PJM / IMM / Independent Cost Consultant conference

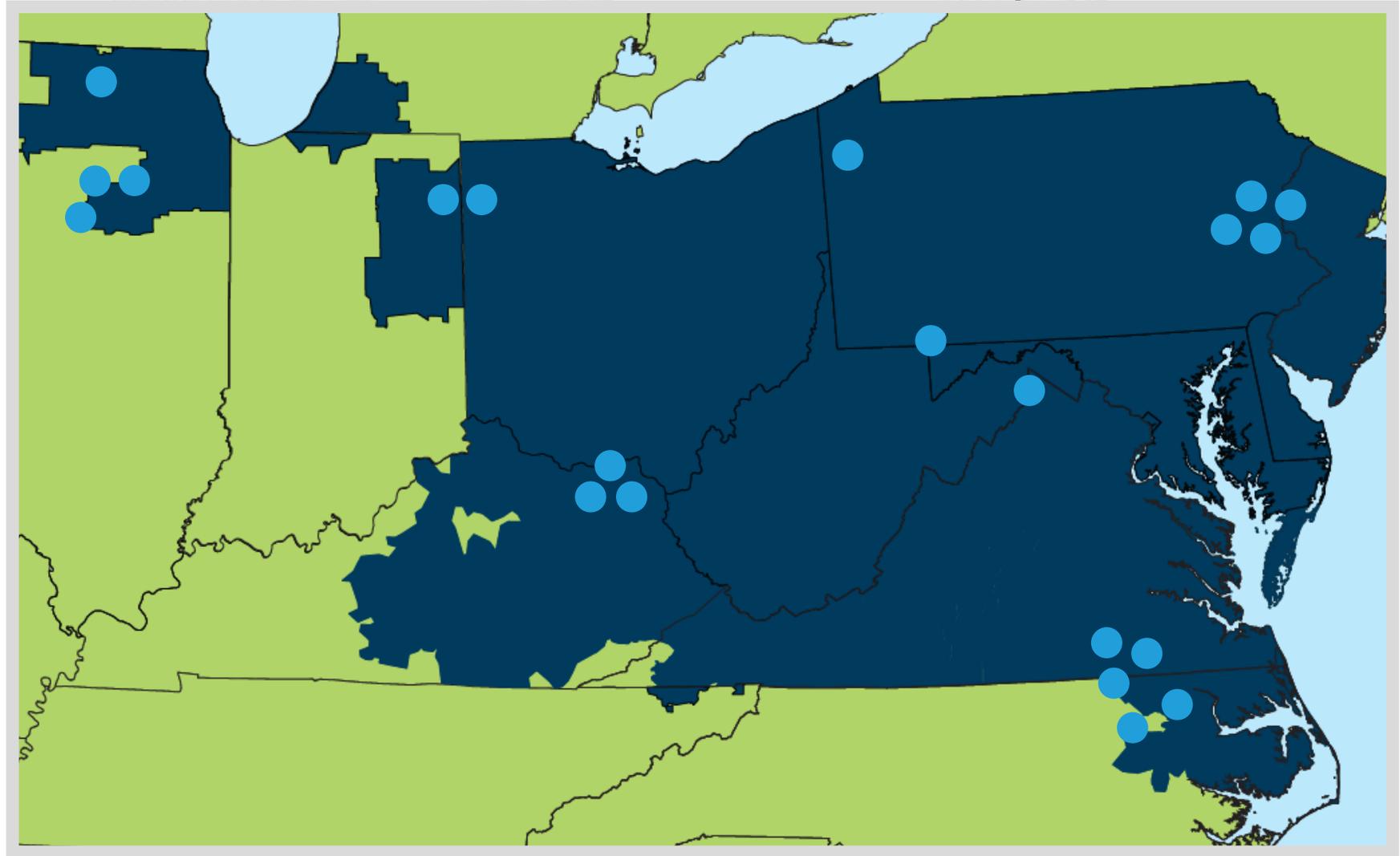
- 2019
  - January
  - February
  - June
  - July
  - August
  - August 29, 2019
    - Today
    - PC Special Session – Cost Containment

# Comparative Cost Framework Example

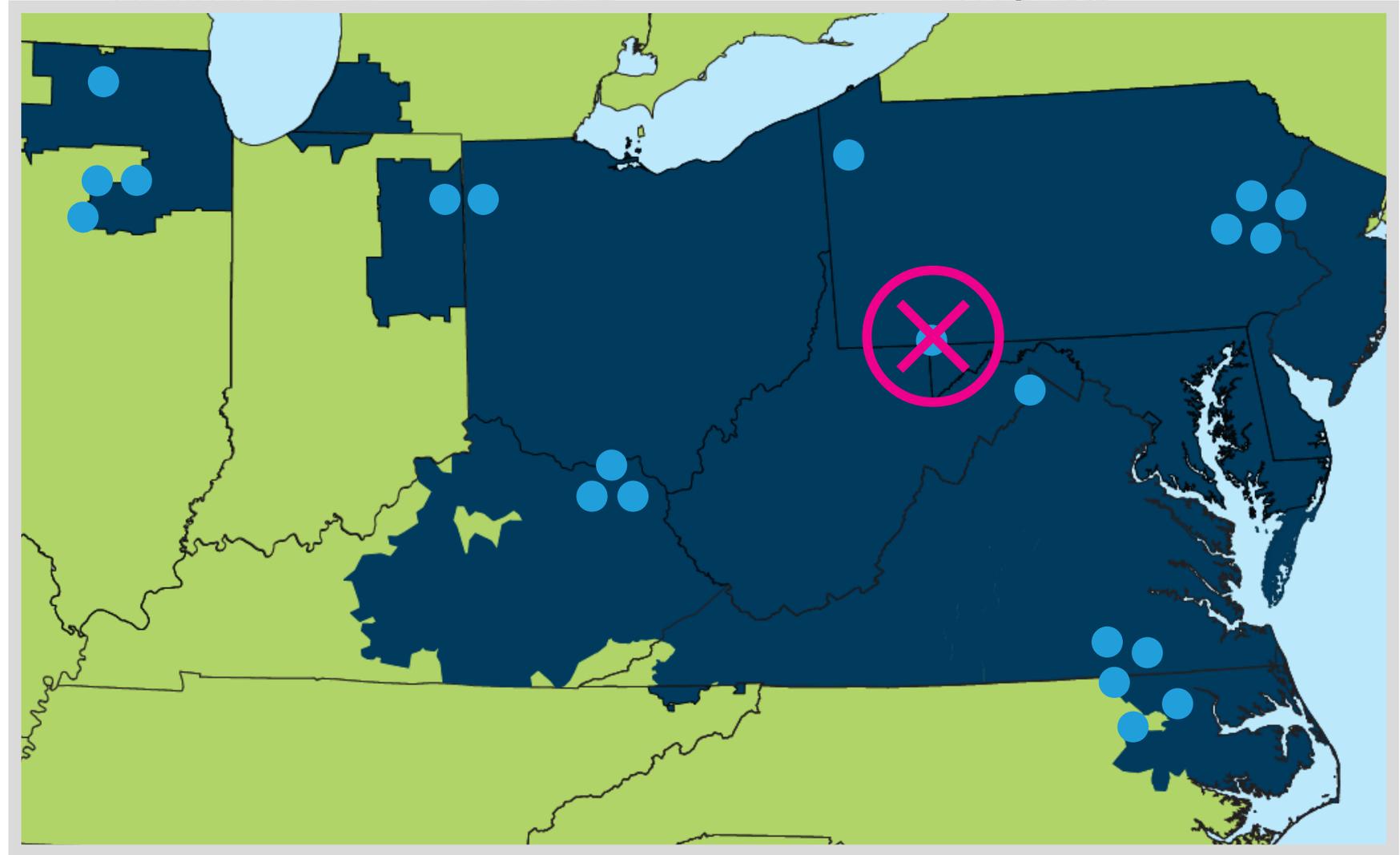
- Example:
  - PJM Competitive Proposal Window Opens and Closes
  - 20 Proposals Received along with project proposal templates and associated data packages
  - Reliability or Market Efficiency



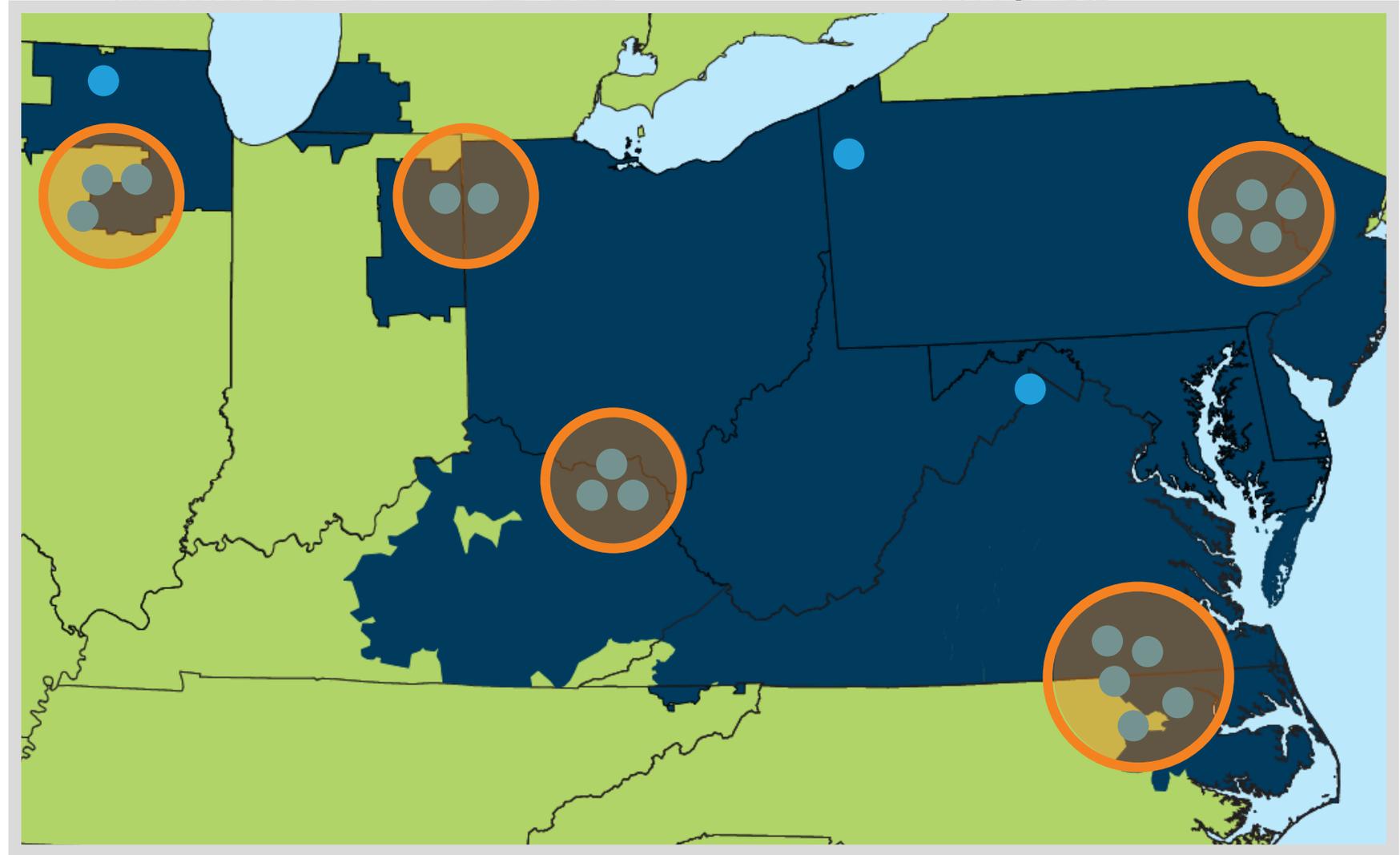
- PJM Competitive Proposal Window Opens and Closes
- 20 Proposals Received



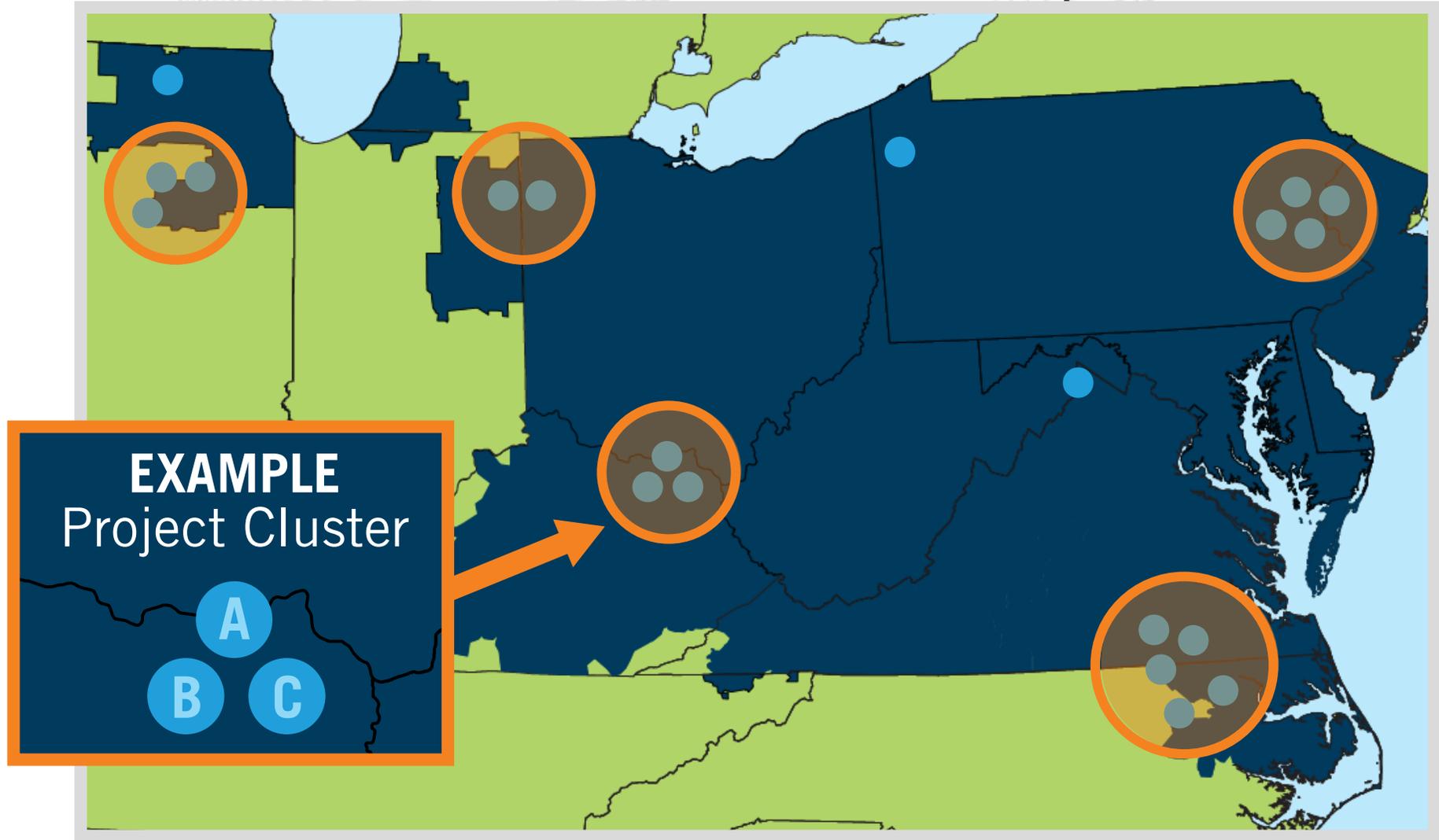
- PJM review of project submissions
- In this example, one project didn't solve the violation



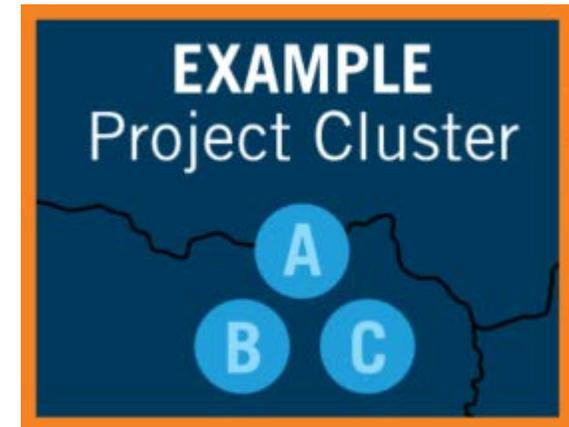
- Logical clusters identified by PJM
- Clusters of projects typically target similar problem areas



- Projects A, B and C to be evaluated as a project cluster
- Analysis of other clusters and other projects to proceed in parallel



- Initiate constructability analysis for the example project cluster
- Continue work on other clusters in parallel



# Comparative Cost Framework: Review Proposed Cost Containment Elections

	Proposal - A	Proposal - B	Proposal - C
Proposed Cost	\$	\$\$	\$
Cost Containment	N	Y	Y

### EXAMPLE: Summary of Proposed Cost Containment

Cost Containment Component	Proposal - A	Proposal - B	Proposal - C
ROE		✓	✓
Capital Structure (Debt to Equity)			✓
Capital Cost			✓
O&M Expense			
Forego AFUDC			
Forego CWIP			
Debt Cost			
Schedule Guarantee			
Abandonment Cost			

# Example Comparative Cost Framework

## Comparison of Proposals – Scenarios

### NPVRR of Proposals by Scenarios (\$M)

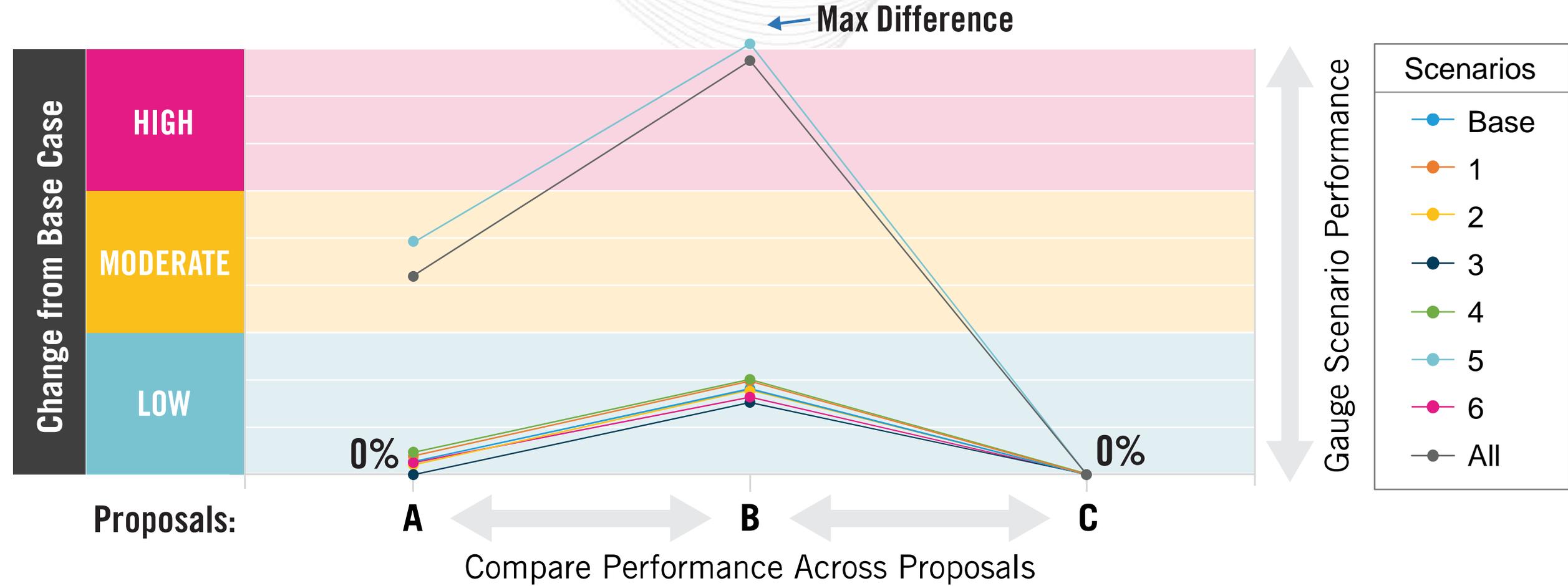
Scenario	Proposal - A	Proposal - B	Proposal - C
Financial Base Case Assumptions	\$	\$	\$
Scenario 1	\$	\$	\$
Scenario 2	\$	\$	\$
Scenario 3	\$\$	\$\$\$	\$
Scenario 4	\$\$	\$\$\$	\$
Scenario 5	\$	\$	\$
Scenario 6	\$	\$	\$

### Financial Base Case Assumptions

Cost Component		Cost Component	
ROE	%	Federal Tax Rate	%
Capital Structure (Equity%)	%	State Tax Rate	%
Debt Cost	%	Property Tax Rate	%
O&M Costs	\$	AFUDC	Yes/No
A&G	\$	CWIP	Yes/No
Ongoing CapEx	\$	Schedule Guarantee	Yes/No
Service Life	# of Years		

# Example Comparative Cost Framework

## Comparison of Proposals – Scenarios Analysis



# Example Comparative Cost Framework Summary

Project Name	Proposal - A	Proposal - B	Proposal - C
Project Sponsor Proposed Cost Estimate	\$	\$\$	\$
Independent Consultant Cost Estimate	\$	\$\$	\$
Cost Containment	N	Y	Y
PJM Cost Estimate with Cost Containment	\$	\$\$	\$

- Comparative Cost Framework
- Overall decisional process
- Next steps



# Manual 14F Language for Comparative Cost Framework Walkthrough

- Entirely new section
- Proposed Structure
- 8.4 Comparative Cost Framework
  - Applicability
  - Assessment of Project Proposals With Cost Containment Provisions
  - Assessment of Project Proposals Without Cost Containment Provisions
  - Financial Analysis Used In the Comparative Cost Framework
  - Review Cost Containment Election

Applicability

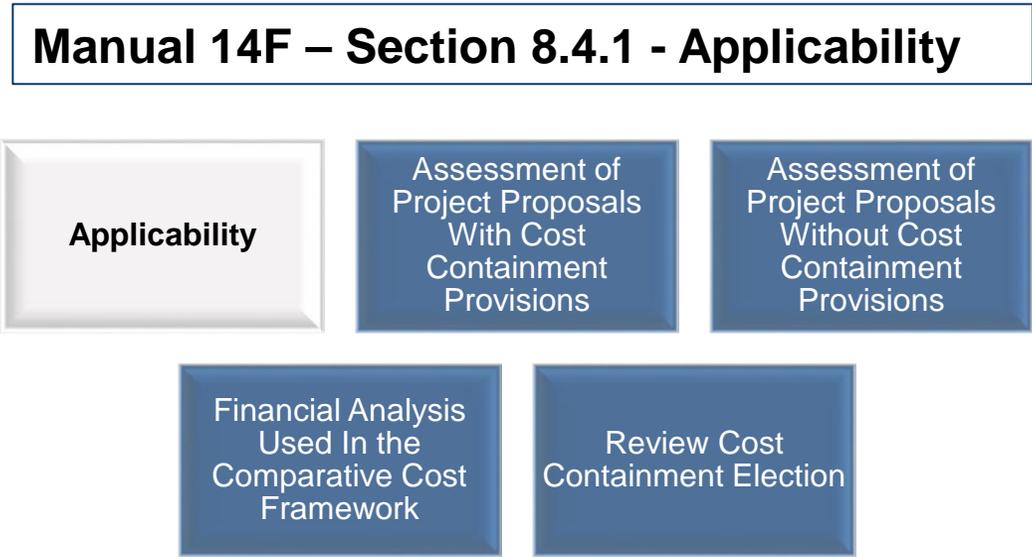
Assessment of  
Project Proposals  
With Cost  
Containment  
Provisions

Assessment of  
Project Proposals  
Without Cost  
Containment  
Provisions

Financial Analysis  
Used In the  
Comparative Cost  
Framework

Review Cost  
Containment  
Election

- Process applies to anything that went through a window
  - For window eligibility, see Operating Agreement Schedule 6 – Section 1.5.8
  - Examples: reliability, market efficiency, long-term or nearer term
- Determine Applicability
  - Identify deficiencies
  - Engagement of process



- Projects WITH cost containment provisions
  - PJM assessment
    - Review project specific risks, scope of project, reasonableness of construction cost, risk of cost increasing beyond cap, risk of cost exceeding defined limit, risk of sponsor inability to complete
  - Review inclusion/exclusion of defined cost elements

## Manual 14F – Section 8.4 - Assessment of Project Proposals With Cost Containment Provisions



## Manual 14F – Section 8.4 – Assessment of Project Proposals Without Cost Containment Provisions

- Projects **WITHOUT** cost containment provisions
  - PJM will assess: project specific risks, scope of the project and reasonableness of the construction costs.



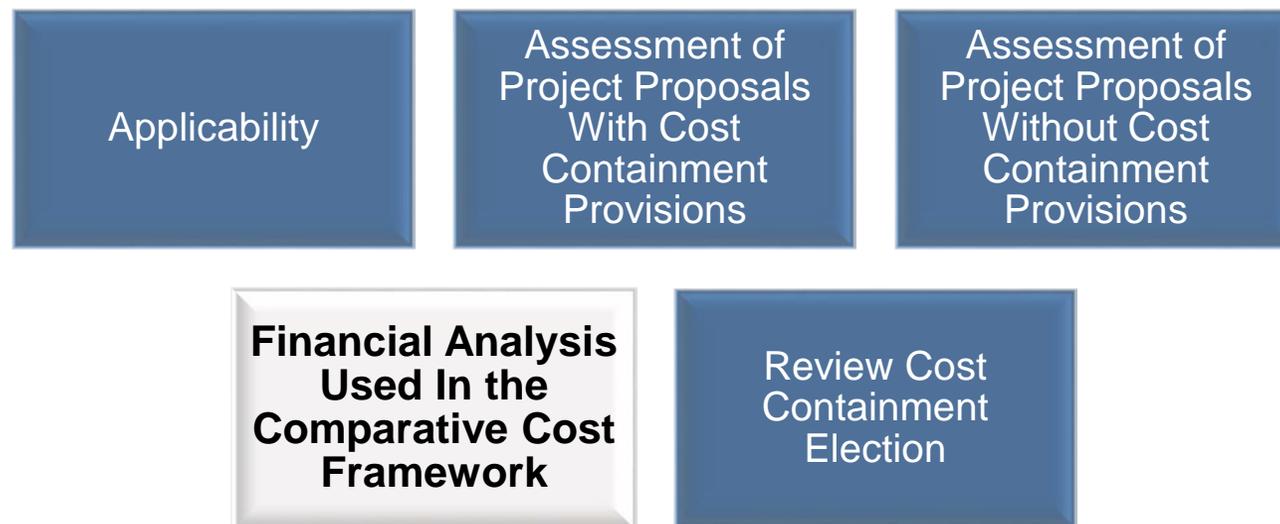
- PJM identifies projects addressing the same violation(s) or constraint(s) – a.k.a. “competing projects”
- PJM applies financial analysis using defined inputs

**Manual 14F – Section 8.4.1 - 8.4.5 Financial Analysis Used In the Comparative Cost Framework**



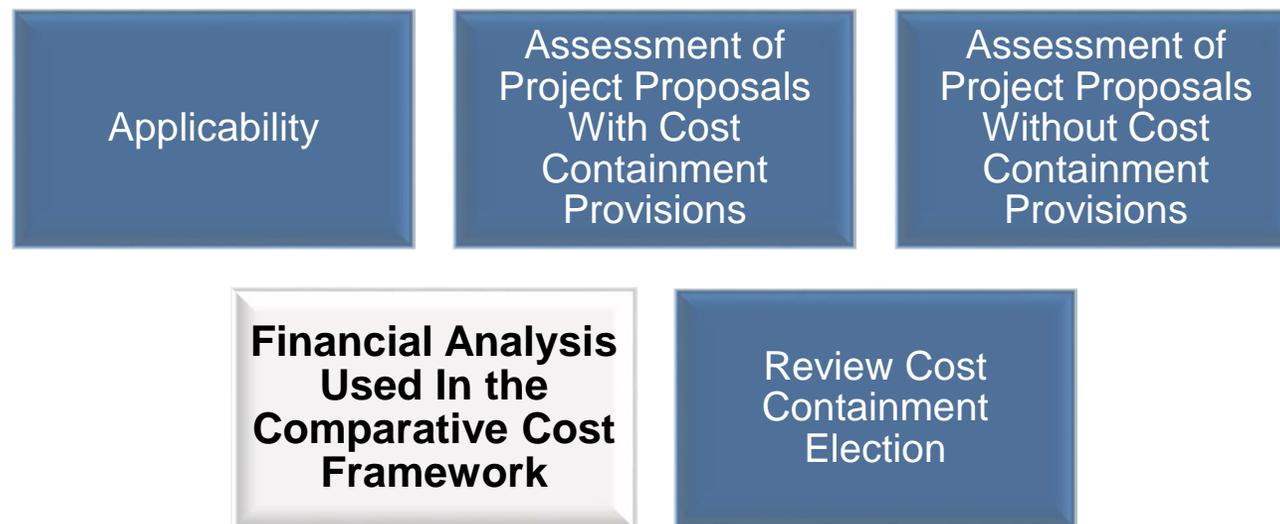
- Key inputs to the financial analysis include but are not limited to:
  - Feedback from the detailed feasibility review
  - Data and information from the project proposals submitted to PJM
  - Financial input assumptions

**Manual 14F – Section 8.4.1 - 8.4.5 Financial Analysis Used In the Comparative Cost Framework**



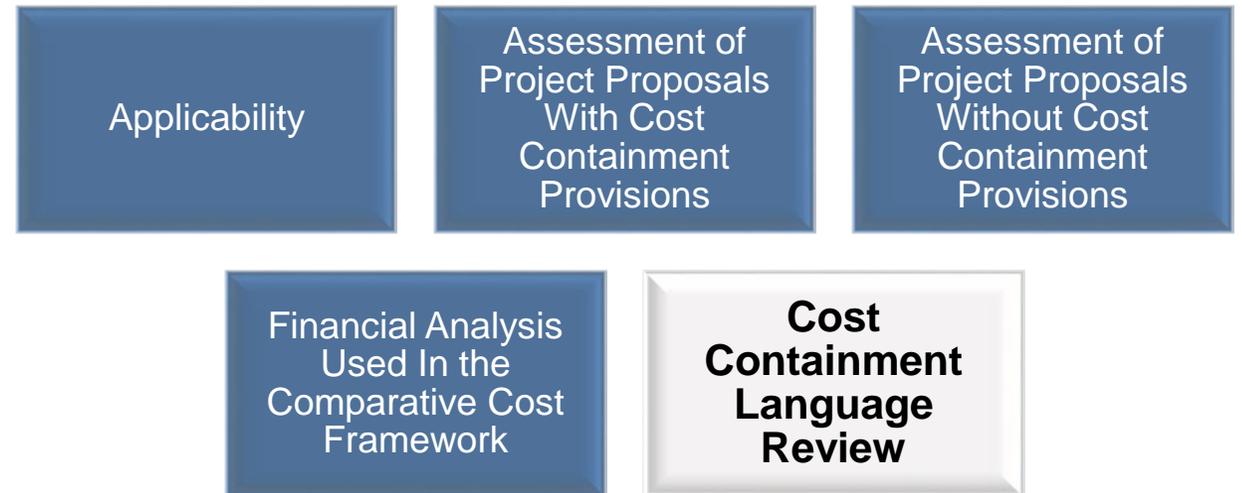
- Key inputs to the financial analysis include but are not limited to:
  - Develop and perform scenario analysis
  - Project cost comparison
- Independent Market Monitor

**Manual 14F – Section 8.4.1 - 8.4.5 Financial Analysis Used In the Comparative Cost Framework**



- PJM will evaluate
  - Any exceptions, exclusions or limitations to the proposed cost containment.

**Manual 14F – Section 8.4.1 – Review Cost Containment Election**



# Next Steps

- September PC
  - First read of M14F
- September MRC
  - First read of M14F
- October PC
  - Second read and request for endorsement of M14F
- October MRC
  - Second read and request for endorsement of M14F

- 8/26/2019 – Original version posted to PJM.com
- 8/28/2019
  - Updated text on slide 13
  - Added slide 16
  - Fixed typographical error on slide 18
  - Removed a row from the table on slide 19